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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,110	07/21/2003	Sushil N. Keswani	1110-0474	6117

7590

11/26/2003

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EXAMINER

NGUYEN, CHAU N

ART UNIT PAPER NUMBER

2831

DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/624,110	Applicant(s) KESWANI ET AL.	
	Examiner Chau N Nguyen	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-11,13 and 14 is/are rejected.
- 7) ☒ Claim(s) 4 and 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>7-21-03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 10-13 are objected to because of the following informalities: in claims 10-13, line 1, change "spring" to --conductor--; in claim 13, line 1, change "1" to --9--, otherwise it is a redundant of claim 5. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5, 9 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Duve (4,531,016).

Duve discloses a twist-on wire connector for joining the ends of a plurality of electrical wires comprising an insulating shell having a body wall and an end wall, the walls having internal surfaces and defining an internal cavity with an opening at one end for receiving the electrical wires, and a spring (Fig. 3) mounted in the internal cavity of the shell and engaging the internal surface of the body wall, the spring including a plurality of coils which have a hexagonal (six sides) cross-section (re claims 1 and 9). Duve also discloses the coils forming an open helix (re claims 5 and 13).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the

subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2, 3, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duve in view of Ijima (JP63-199936).

Duve discloses the invention substantially as claimed except for the hexagonal cross-section being defined by first and second surfaces joined at a shell-engaging crest, third and fourth surfaces joined at an electrical-wire-engaging crest, a fifth surface joining said first and third surfaces, and a sixth surface joining said second and fourth surfaces, wherein at least one of the fifth and sixth surfaces is generally planar. Ijima discloses a spring having a hexagonal cross-section which is defined by first and second surfaces joined at a shell-engaging crest, third and fourth surfaces joined at an electrical-wire-engaging crest, a fifth surface joining said first and third surfaces, and a sixth surface joining said second and fourth surfaces, wherein at least one of the fifth and sixth surfaces is generally

planar (Fig. 7). It would have been obvious to one skilled in the art to modify the spring of Duve to have the cross-section configuration taught by Ijima since it is taught by Ijima that spring with different shapes is known for being used to form coils. In addition, it has been held that merely changing shape of the device involves only routine skill in the art. *See Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459.

8. Claims 6-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blaha (4,707,567) in view of Cogan (4,954,095).

Blaha discloses a twist-on connector for joining the ends of a plurality of electrical wires, comprising an insulating shell having a body wall and an end wall, the walls having internal surfaces and defining an internal cavity with an opening at one end for receiving the electrical wires, and a spring (Figs 3 and 4) mounted in the internal cavity of the shell and engaging the internal surface of the body wall, the spring including a plurality of coils which form an open helix, and the cross-section of the coils defining a rectangular outer portion. Blaha does not disclose the coils having a cross-section with a central bore formed therein (or the coils formed of a hollow spring or wire). Cogan discloses an invention employing tubular conductor or wire. Cogan discloses that hollow or tubular conductor or

wire has great conductivity and flexibility such that it can be repeatedly bent by hand. It would have been obvious to one skilled in the art to modify the coils or the wire 18,22 of Blaha with a central bore, in other words, to use hollow wire for the coils of Blaha since hollow wire has great flexibility such that it can be repeatedly bent by hand without suffering mechanical or electrical damage as taught by Cogan.

Allowable Subject Matter

9. Claims 4 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Cited Art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Doolittle, Bulle et al. and Soreny disclose hollow wires. Starkey et al., Nygard and Martin discloses wires having polygonal cross-section.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N Nguyen whose telephone number is 308-0693. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308 3682. The fax phone number for the organization where this application or proceeding is assigned is (703) 305 3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Chau N Nguyen
Primary Examiner
Art Unit 2831